Serial No. 10/557,528

Atty. Doc. No. 2003P01440WOUS

Amendments To The Claims:

Please amend the claims as shown.

1.-9. (Canceled)

10. (Previously presented) A bipolar plate for fuel cells, wherein the bipolar plate is

provided on its surface with a layer of a hydrophobic material soluble in a solvent, wherein the

hydrophobic material comprises alkylsilanes, and wherein the alkylsilanes are alkyl-aryl silanes

or halogen-alkyl-aryl-silanes.

11. (Previoulsy presented) The bipolar plate in accordance with claim 10, wherein the

hydrophobic material further comprises an amorphous fluoropolymer.

12. (Previously presented) The bipolar plate in accordance with claim 10, wherein the

hydrophobic material further comprises a polysiloxane compound.

13. (Canceled)

14. (Previously presented) The bipolar plate in accordance with claim 10, wherein a

thickness of the layer is adjusted to an optimum between a low electrical contact resistance to an

adjoining electrode and a high hydrophobicity.

15. (Previously presented) The bipolar plate in accordance with claim 11, wherein a

thickness of the layer is adjusted to an optimum between a low electrical contact resistance to an

adjoining electrode and a high hydrophobicity.

16. (Previously presented) The bipolar plate in accordance with claim 12, wherein a

thickness of the layer is adjusted to an optimum between a low electrical contact resistance to an

adjoining electrode and a high hydrophobicity.

17. (Previously presented) The bipolar plate in accordance with claim 10, wherein a

thickness of the layer ranges from 0.1 nm to 50 nm.

2

Serial No. 10/557,528

Atty. Doc. No. 2003P01440WOUS

- 18. (Previously presented) The bipolar plate in accordance with claim 17, wherein the thickness of the layer ranges from 0.5 nm to 5 nm.
- 19. (Previously presented) The bipolar plate in accordance with claim 11, wherein a thickness of the layer ranges from 0.1 nm to 50 nm.
- 20. (Previously presented) The bipolar plate in accordance with claim 12, wherein a thickness of the layer ranges from 0.1 nm to 50 nm.
- 21. (Presently presented) The bipolar plate in accordance with claim 14, wherein a thickness of the layer ranges from 0.1 nm to 50 nm.
- 22. (Previously presented) The bipolar plate in accordance with claim 10, wherein the bipolar plate comprises a metallic alloy.
- 23. (Previously presented) The bipolar plate in accordance with claim 22, wherein the metallic alloy is a nickel-based alloy.
- 24. (Previously presented) The bipolar plate in accordance with claim 11, wherein the bipolar plate comprises a metallic alloy.
- 25. (Currently Amended) The bipolar plate in accordance with claim 10, further comprising a conductive contact layer between the bipolar plate and the layer made of the hydrophobic material, wherein the [[highly-]]conductive contact layer is made of a noble metal.
- 26. (Previously presented) The bipolar plate in accordance with claim 25, wherein the noble metal is gold.

Serial No. 10/557,528 Atty. Doc. No. 2003P01440WOUS

- 27. (Previously presented) A fuel cell, comprising:
 - a membrane-electrode unit; and
- a bipolar plate electrically contacting the membrane-electrode unit on the electrode side, wherein the bipolar plate is in accordance with claim 10.
- 28. (Canceled)